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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,214	02/11/2002	Lennart Hansson	HANSSON 3A	9275

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EXAMINER	
BERTOGLIO, VALARIE E	

ART UNIT	PAPER NUMBER
1632	

DATE MAILED: 10/07/2003 15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/071,214	HANSSON ET AL.	
	Examiner	Art Unit	
	Valarie Bertoglio	1632	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *08 July 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,8-13,15-18 and 20-69* is/are pending in the application.

4a) Of the above claim(s) *3 and 36-58* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,8-13,15-18,20-35 and 59-69* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 June 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

Applicant's amendment filed on 07/08/2003 has been entered. Claims 1,2,4,8-13,15-18 and 20-30 have been amended. Claims 59-69 have been added. Claims 5-7, 14 and 19 have been canceled. 1-4,8-13,15-18 and 20-69 are pending and claims 1,2,4,8-13,15-18, 20-35 and 59-69 are under consideration in the instant action.

Election/Restrictions

Claims 3 and 36-58 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 11.

Claim Rejections - 35 USC § 112-1st paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1,2,4,8,16-18,20-35 and 59-69 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In light of applicants' amendment to claims 1,2,4,8,16-18,20-35,59,60,62,64-66, the previous rejection for failing to describe any nucleic acid fragments encoding at least a significant part of SCCE, is withdrawn. However, a new grounds of rejection is necessitated by the amendment and appears below.

The previous rejections of claims 21 and 22 for failing to provide written description of the claimed non-human mammals (previous office action mailed 02/13/2003, page 5, paragraph 2, is maintained and reiterated below.

Vas-Cath Inc. v. Mahurkar, 19USPQ2d 1111, clearly states that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention.* The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed.*" (See page 1117.) The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See *Vas-Cath* at page 1116).

Claims 1,2,8,16-18,20-35, as amended, and newly added claims 59,60,62,64-66 encompass any nucleic acid coding for a stratum corneum chymotryptic enzyme which hybridizes with the complementary sequence to SEQ ID NO:1 (claims 1,2,8,16-18,20-35,60 and 65) or SEQ ID NO:3 (claims 59, 62,64, 66) under stringent hybridization conditions. Claims 4, 61,63 and 67-69 encompass all nucleotide sequences that encode a protein with 75% (claim 4), 80% (claim 67), 90% (claim 68) or 95% (claim 69) amino acid identity to the amino acid sequence set forth by SEQ ID NO:2 wherein the encoded protein has serine protease activity and comprises the partial sequence X_3-Asn-X_4-X_5-X_6-X_7-X_8-Ser. Claims 1,2,4,8,16-18,20-35 and 59-69 encompass a genera of nucleic acids that can vary considerably from the sequence of SEQ ID NO:1. This genera includes nucleic acids that encode fully functional, partially functional and non-functional SCCE polypeptides. The disclosure does not describe any of the nucleotides encompassed by these claims other than SEQ ID NO:1.

In the instant case the claimed nucleotide sequences coding for an SCCE which hybridize with the complementary sequence to SEQ ID NO:1 or SEQ ID NO:3 under stringent hybridization conditions as encompassed by the claims lack a written description. The claimed nucleotide sequences nucleotide sequences that encode a protein with 75% (claim 4), 80% (claim 67), 90% (claim 68) or 95% (claim 69) amino acid identity to the amino acid sequence set forth by SEQ ID NO:2 wherein the encoded protein has serine protease activity and comprises the partial sequence X_3-Asn-X_4-X_5-X_6-X_7-X_8-Ser as encompassed by the claims also lack a written description. The specification asserts that SCCE proteins from multiple animal species exhibit 75% (claim 4), 80% (claim 67), 90% (claim 68) or 95% (claim 69) amino acid similarity to the amino acid sequence set forth by SEQ ID NO:2 (Table 6) but does not describe any with the corresponding amino acid identity and does not describe where the identity must lie for proper function.

The specification fails to describe what DNA molecules fall into these genera and it was unknown as of Applicants' effective filing date that any of these DNA molecules would have the property of encoding an SCCE polypeptide having the same structural and functional properties as that encoded by SEQ ID NO:1. There is no evidence on the record of a relationship between the structures of the nucleotide sequences coding for an SCCE which hybridize with the complementary sequence to SEQ ID NO:1 or SEQ ID NO:3 and the nucleotide sequences set forth by SEQ ID NO:1 or SEQ ID NO:3 that would provide any reliable information about the structure of DNA molecules within the genus. There is no evidence on the record of a relationship between the structures of the nucleotide sequences coding for a protein having serine protease activity with 75% (claim 4), 80% (claim 67), 90% (claim 68) or 95% (claim 69) amino

acid identity to the amino acid sequence set forth by SEQ ID NO:2 and comprises the partial sequence X_3-Asn-X_4-X_5-X_6-X_7-X_8-Ser, and the nucleotide sequence set forth by SEQ ID NO:1 that would provide any reliable information about the structure of DNA molecules within the genus. The claimed invention as a whole is not adequately described if the claims require essential or critical elements that are not adequately described in the specification and that is not conventional in the art as of applicants effective filing date. Possession may be shown by actual reduction to practice, clear depiction of the invention in a detailed drawing, or by describing the invention with sufficient relevant identifying characteristics such that a person skilled in the art would recognize that the inventor had possession of the claimed invention. Pfaff v. Wells Electronics, Inc., 48 USPQ2d 1641,1646 (1998).

With the exception of the sequence referred to above, the skilled artisan cannot envision the detailed chemical structure of the encompassed polynucleotides, and therefore conception is not achieve regardless of the complexity or simplicity of the method of isolation. In the instant case the claimed embodiments of nucleotide sequences that encode an SCCE encompassed within the claimed genera lack a written description. The specification fails to describe what nucleotide sequences fall into these genera and it was unknown as of applicants' effective filing date that any of these nucleotide sequences would have the property of encoding a functional SCCE. The skilled artisan cannot envision the detailed chemical structure of the encompassed nucleic acid molecules and therefore conception is not achieved until reduction to practice has occurred, regardless of the complexity or simplicity of the method of isolation. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method of isolating it. The nucleic acid itself is required. See *Fiers v. Revel*, 25

USPQ2d 1601 at 1606 (CAFC 1993) and *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 18 USPQ2d 1016.

One cannot describe what one has not conceived. See *Fiddes v. Baird*, 30 USPQ2d 1481 at 1483. In *Fiddes*, claims directed to mammalian FGF's were found to be unpatentable due to lack of written description for that broad class. The specification provided only the bovine sequence.

In view of the above considerations one of skill in the art would not recognize that applicant was in possession of the necessary common features or attributes possessed by any member of the genera of genes encompassed by the claims. Therefore, Applicants were not in possession of the genera of nucleotide sequences encompassed by the claims. University of California v. Eli Lilly and Co., 43 USPQ2d 1398, 1404, 1405 held that "to fulfill the written description requirement, a patent specification must describe an invention and do so in sufficient detail that one skilled in the art can clearly conclude that "the inventor invented the claimed invention".

2) The rejection of claims 21 and 22 under written description as outlined on page 5, paragraph 2 of the previous office action is maintained. Claims 21 and 22 recite that the transgenic non-human mammals exhibit a predisposition for cancer. Applicant argues that "these are original claims and that original claims provide their own description" (refer to amendment entered 07/08/2003, page 9, paragraph 2.2). This argument, and its relevance, is unclear and is not persuasive. Applicant further argues that there is a general teaching in support of the claims on page 18, lines 36-38 of the specification. This description is merely prophetic and due to the

unpredictability of phenotype in transgenic non-human mammals, it cannot be predicted that the claimed transgenic non-human mammals would have the claimed phenotype.

Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 U.S.C. §112 is severable from its enablement provision (see page 1115).

Claims 1,2,4,8-13,15-18 and 20-35 and newly added claims 59-69 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The specification, while being enabling for a transgenic mouse comprising a transgene comprising SEQ ID NO:1, or encoding SEQ ID NO:2, operably linked to an SV40 promoter wherein said mouse displays epidermal hyperplasia and hyperkeratosis and a mild cellular inflammatory reaction of the skin, does not reasonably provide enablement for any non human transgenic mammal comprising a) a nucleic acid comprising a heterologous nucleic acid sequence coding for a stratum corneum chymotryptic enzyme (SCCE) which hybridizes with the complementary sequence to the nucleotide sequence SEQ ID NO:1 or SEQ ID NO:3 under stringent hybridization conditions or b) any nucleotide sequences that encode a protein with 75% (claim 4), 80% (claim 67), 90% (claim 68) or 95% (claim 69) amino acid identity to the amino acid sequence set forth by SEQ ID NO:2 wherein the encoded protein has serine protease activity and comprises the partial sequence X_3-Asn-X_4-X_5-X_6-X_7-X_8-Ser, operably linked to any ubiquitous promoter with activity in skin wherein said animal has any phenotype. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. The

previous rejection is maintained for the reasons of record on pages 6-13 of the previous office action mailed 02/13/2003 and reiterated below.

Claims are directed to a non human transgenic mammal which is a rodent selected from the group consisting of mice, rats and rabbits comprising a) a nucleic acid comprising a heterologous nucleic acid sequence coding for a stratum corneum chymotryptic enzyme (SCCE) which hybridizes with the complementary sequence to the nucleotide sequence SEQ ID NO:1 (1,2,8-13,15-18,20-35,60,65) or SEQ ID NO:3 (claims 59,62,64 and 66) under stringent hybridization conditions or b) any nucleotide sequences that encode a protein with 75% (claims 4,61 and 63), 80% (claim 67), 90% (claim 68) or 95% (claim 69) amino acid identity to the amino acid sequence set forth by SEQ ID NO:2 wherein the encoded protein has serine protease activity and comprises the partial sequence X_3-Asn-X_4-X_5-X_6-X_7-X_8-Ser, operably linked to any ubiquitous promoter with activity in skin (claims 1,2,4-13, 15,16, 20-35,59 and 63-69) wherein the mammal exhibits an abnormal skin phenotype (claim 20, 23-28 and 31) or exhibits a predisposition for cancer (claims 21, 22 and 31). Claims 9 and 15 are directed to the transgenic mammal of claim 1 wherein the nucleic acid comprises SEQ ID NO:1.

1) Applicant's arguments with respect to the enablement rejection set forth in the previous office action on the grounds that the specification fails to enable any species of nonhuman transgenic mammal comprising a transgene operably linked to any promoter have been considered and are found partially persuasive (refer to pages 7-9 of the previous office action). Applicant's amendments to the claims have limited the species of mammal encompassed by the claims to mouse, rat and rabbit (claims 1,2,4,9-13,15-18,20-35 and 59-69) or mouse (claim 8) and the promoter to a ubiquitous promoter that drives expression in the skin (claims

1,2,4,8-13, 15,16,20-35, 59,65-69) or an SV40 promoter (claim 17) or the SV40 early promoter (claim 18).

Applicant argues that the newly introduced claim limitations limiting the claims to mouse rat or rabbit species overcomes this rejection. However, as set forth in the art, the phenotype of transgenic mammals, even closely related mammals, is unpredictable and the phenotype effected by a transgene in one species of mammal, mouse in the instant case, is not predictive of the phenotype that would be obtained if the same transgene were expressed in a closely related species, including rat and rabbit. The transgenic art sets forth that transgene expression in different species of transgenic rodents is not predictable and varies according to the particular host species. Presently, the species-specific requirements for transgene design are not understood clearly. Examples in the literature aptly demonstrate that even closely related species such as rat and mouse carrying the same transgene construct can exhibit widely varying phenotypes (refer to pages 7-8 of the prior office action; Hammer, 1990; Mullins 1996, page S38, column 1, paragraph 2).

With respect to the aspect of the rejection regarding the promoter, Applicant argues that the SV40 early promoter is one of a class of ubiquitous promoters and that other ubiquitous promoters are more similar to the SV40 early promoter than to the "unsuccessful mouse/human certain 14 promoter" (refer to amendment page 10, paragraph 3). The relevance of the certain 14 promoter is not clear. With regard to other ubiquitous promoters, Applicant's arguments are not persuasive because the SV40 promoter of the invention appears to have an unexpected and unpredictable expression pattern in combination with the scce gene that could contribute to the phenotypes observed in the transgenic mammals of the invention. It cannot be predicted that

other ubiquitous promoters will share these characteristics. For example, the specification teaches that the SV40 early promoter unexpectedly resulted in significantly higher levels of expression in the suprabasal and more superficial layers of the skin than in other tissues (page 11, lines 27-33). Furthermore, expression was not ubiquitous as expression was in a "surprisingly restricted distribution" because the SV40 regulatory sequences "normally mediates high level transcription in proliferative cells whereas here the strongest expression in differentiated keratinocytes was observed (specification page 10, line 37-page 11, line 2). It cannot be predicted that other ubiquitous promoters would exhibit such an uncharacteristic pattern of expression when used to express an scce gene. Therefore, while in general, the SV40 promoter may be more akin to other ubiquitous promoters as argued by applicant, it cannot be assumed that this argument would hold true for the instant invention where the SV40 promoter behaves in an uncharacteristic manner.

Claim 8 limits the species of transgenic nonhuman mammal to mouse and the aspect of this rejection concerning the species of mammal is withdrawn as it relates to claim 8. Claims 17 and 18 recite an SV40 promoter and are therefore the aspect of this rejection concerning the promoter is withdrawn as it pertains to claim 18.

2) Applicant's amendment to the claims in response to the rejection that the specification fails to enable nucleic acids encoding only "a significant part", fails to overcome the rejection set forth on pages 9-11 of the previous office action mailed 02/12/2003. Applicant has removed the phrase "a significant part", however, for the reasons set forth below, the amended form of the claims fails to overcome the rejection and the rejection is therefore maintained as it relates to amended claims 1,2,4,8,16-18, 20-35 and newly added claims 59-69.

With respect to claims 1,2,8,16-18, 20-35, and 59-66, the specification fails to enable heterologous nucleotide sequence coding for an SCCE which hybridizes with the complementary sequence to the nucleotide sequence SEQ ID NO:1 or SEQ ID NO:3 under stringent hybridization conditions. A large number of nucleotide sequences will hybridize to the sequence complementary to SEQ ID NO:1 or SEQ ID NO:3, including fragments of the SCCE gene and sequences that encode and inactive SCCE products. The specification fails to teach which nucleic acids that fulfill the limitations of the claims would have the same activity as SEQ ID NO:1 and would produce the desired phenotype in a transgenic mammal (refer to pages 9-11 of previous office action).

With respect to claim 4, the rejection stands as set forth in the prior office action and is applied to newly added claims 67-69. The amendment to claim 4 adds the functional limitation of having serine protease activity, however, the specification does not teach how to fulfill the other limitations of the claims such that serine protease activity is obtained. In addition to the 8 amino acid partial sequence recited in the claims, what other sequences must be present for SCCE activity? Claims 67-69 add more stringent limitations in that the nucleotide sequence must encode 80%,90% or 95% sequence identity, however, the specification does not teach what amino acids must share identity with SEQ ID NO:2. One of skill in the art would not know what nucleotide sequence encompassed in the genera of sequences embraced by the claims would produce the protein and thus the desired animal (refer to pages 9-11 of the previous office action).

It was noted in the previous office action that the specification teaches that it may be necessary to include intron sequences when preparing a nucleotide sequence for the claimed

transgenic (previous office action, page 10, 2nd paragraph; specification page 16, lines 30-31). However the specification does not teach which intron sequences and teaches "It is likely that not all of the intron sequences are necessary and that intron sequences from SCCE from other species or intron sequences from genes coding for other proteins may also be suitable...." (page 16, lines 34-36). The specification does not provide any guidance as to how one would determine what intron sequences may be necessary or where they should be placed within the transgene to result in a functional transgene. Applicant argues that one of skill in the art would know how to test each of the intron sequences and that there are a limited number of such sequences to test. However, the specification teaches that intronic sequences from multiple species may also be suitable, increasing the number of sequences to be tested. Furthermore, one would have to generate transgenic mammals comprising each intronic region to be tested. The specification fails to provide the guidance necessary to overcome the unpredictability set forth by the art of making transgenic mammals as described on pages 7-9 of the previous office action. Applicant also argues that one of skill in the art could identify the introns based on available sequence information and that the placement of the introns within the transgene would be obvious as they would be inserted between the exons as in the genomic DNA (page 11, last paragraph of section 3.4). However, there is a lack of guidance in the specification with respect to where to place an intron derived from a different gene. Furthermore, the specification fails to teach how one of skill in the art would know when the desired intronic sequences had been obtained. Specifically, the specification fails to teach whether the desired introns lead to more precise levels of expression or increased levels of expression and how the altered transgene would affect the phenotype of the animal.

3) Applicant's arguments in response to the rejection on the grounds of that the specification fails to enable a transgenic non human mammal comprising an SCCE transgene wherein the mammal displays any phenotype have been fully considered and are not found persuasive.

Applicant failed to address the rejection of claims 1,2 4-13 and 15-18 for not citing a phenotype and therefore encompassing any phenotype (see previous office action, page 11, lines 13-15). This rejection also applies to newly added claims 59-69 which also fail to recite a phenotype. Because the claims encompass the claimed transgenic non human mammal displaying any phenotype, it would require undue experimentation for one of skill in the art to determine how to generate the claimed mammals such that they displayed any phenotype. One of skill in the art would not know how to generate the claimed mammals exhibiting any phenotypes other than epidermal hyperplasia and hyperkeratosis and a mild cellular inflammatory reaction of the skin. Due to the unpredictability set forth in the art of making transgenics, it would require undue experimentation for one of skill in the art to generate the claimed mammals exhibiting any phenotype other than epidermal hyperplasia and hyperkeratosis and a mild cellular inflammatory reaction of the skin (refer to paragraph bridging pages 11-12 of the previous office action) Furthermore, one would not how to use said mammals that displayed any phenotype other than those described in the specification.

With respect to claims 21 and 22, drawn to transgenic non human mammals exhibiting a predisposition for cancer, applicant argues that a link between overexpression of SCCE and cancer has clearly been established in the art. It is maintained, however, that the evidence of record fails to support that the claimed transgene constructs will be expressed to levels and in the

proper cell types to lead to ovarian cancer (refer to paragraph bridging pages 11 and 12 of the previous office action). It cannot be predicted that the SCCE encoded by the transgenes encompassed by the claims will exhibit the proper activity to lead to cancer. Therefore, based on the unpredictability of transgene expression and phenotype in transgenic animals, as set forth in the art as described above and in the previous office action as well as the unpredictability set forth in the specification, it cannot be assumed that the claimed transgenic mammals will exhibit a predisposition to all cancers or ovarian cancer despite the established role of SCCE in the development of ovarian cancer.

Claim Rejections - 35 USC § 112-2nd paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Applicant's amendments to the claims have been fully considered with respect to the rejection of Claims 8,11,14 and 15 under 35 U.S.C. 112, second paragraph, as being indefinite and are found persuasive. Therefore, the rejection has been withdrawn.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

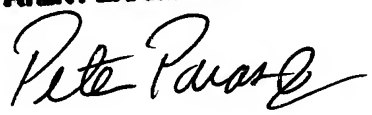
CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Valarie Bertoglio whose telephone number is 703-305-5469. The examiner can normally be reached on Mon-Weds 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Reynolds can be reached on 703-305-4051. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1234.

PETER PARAS
PATENT EXAMINER



Valarie Bertoglio
Examiner
Art Unit 1632